

CLAIMS

1. Method of fabricating a die containing an integrated circuit comprising active components and passive components, characterized in that it comprises the following steps:

- a first substrate (1) is produced containing at least one active component (3) of said active components and a second substrate (2) is produced containing "critical" components (7, 8) of said passive components, and

- the two substrates (1) and (2) are bonded by layer transfer.

2. Method according to claim 1, characterized in that said at least one active component (3) comprises transistors.

3. Method according to claim 1 or claim 2, characterized in that said critical passive components comprise at least one capacitor (7) and/or at least one MEMS (8).

4. Method according to claim 3, characterized in that the dielectric material of said at least one capacitor (7) is a perovskite.

5. Method according to any one of claims 1 to 4, characterized in that said second substrate (2) is an electrically conductive material.

6. Method according to any one of claims 1 to 4, characterized in that said second substrate (2) is a dielectric material.

7. Method according to claim 6, characterized in that the second substrate (2) is of perovskite.

8. Method according to any one of the preceding claims, characterized in that dielectric insulation trenches (6) are further produced during the production of the second substrate (2).

9. Method according to any one of the preceding

claims, characterized in that at least one non-critical passive component such as a capacitor in trenches (15) is further produced during the production of the second substrate (2).

5           10. Method according to any one of the preceding claims, characterized in that at least one inductor (12) in the vicinity of the face of the second substrate (2) opposite the bonding face is further produced after said bonding of the two substrates (1) and (2).

10           11. Method according to claim 10, characterized in that said at least one inductor (12) is produced on top of inductive insulation trenches (18) previously formed in the second substrate (2).

15           12. Method according to any one of the preceding claims, characterized in that at least one interconnection line (16, 17) passing through all or part of the second substrate (2) is further produced after said bonding of the two substrates (1) and (2).

20           13. Die (100) fabricated by a method according to any one of claims 1 to 12.

25           14. Die (100) containing an integrated circuit comprising active components and passive components and consisting of a single stack of layers, characterized in that it includes an interface between two of said layers such that the portion of the die (100) situated on one side of said interface contains at least one active component (3) of said active components and the other portion of the die (100) contains "critical" components (7, 8) of said passive components.

30           15. Die according to claim 14, characterized in that said critical passive components comprise at least one capacitor (7) whose dielectric material is a perovskite and/or at least one MEMS (8) enclosed in a cavity (5) situated inside said die (100).

35           16. Die according to claim 14 or claim 15,

characterized in that it further comprises dielectric insulation trenches (6).

17. Die according to any one of claims 14 to 16, characterized in that said integrated circuit further comprises at least one non-critical passive component such as a capacitor in trenches (15).

18. Die according to any one of claims 14 to 17, characterized in that said active components (3) are disposed in the vicinity of a first face of the die (100) and in that said integrated circuit further comprises at least one inductor (12) situated in the vicinity of the face of the die (100) opposite said first face.

19. Die according to claim 18, characterized in that said at least one inductor (12) is situated on top of inductive insulation trenches (18).

20. Die according to any one of claims 14 to 19, characterized in that said active components (3) are disposed in the vicinity of a first face of the die (100) and it further comprises at least one interconnection line (16, 17) that emerges in the vicinity of the face of the die (100) opposite said first face.